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None

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 UK CL (Edition K) **G4T TAE TAX, G4V VAC, G4X X6**
 INT CL⁵ **G07D, G07F**

(54) **Automatic ticket dispenser**

(57) An automatic ticket dispenser reads and stores the serial number of a banknote that is accepted as payment for a ticket as well as the serial number of the ticket. If the banknote is later discovered to be a forgery, the ticket bought with the banknote can be identified and confiscated when next used. Preferably an optical scanner 10 reads the number on the banknote, the output from the scanner being sent to a computer 12. The entire area of the banknote may be masked except for the area bearing the serial number. If the note is accepted by a note validator 4, a ticket is issued from a stack 6 and conveyed to dispensing slot 9. The ticket may be a railway ticket, a telephone card, or a fuel card.

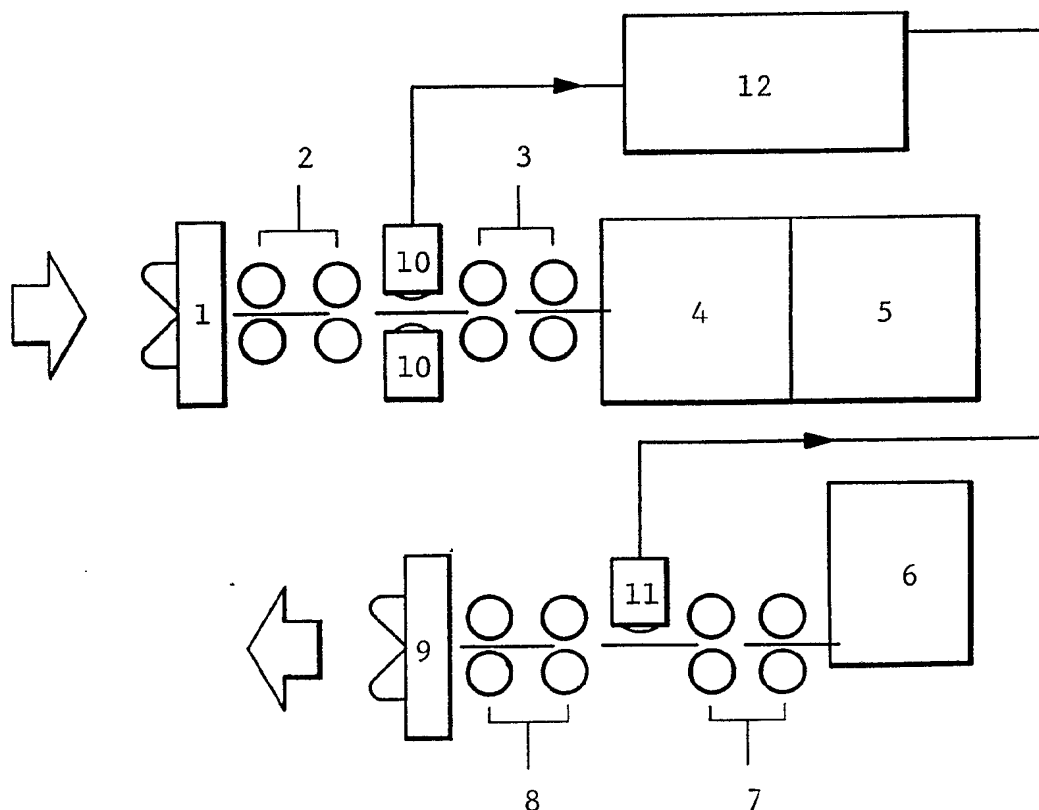
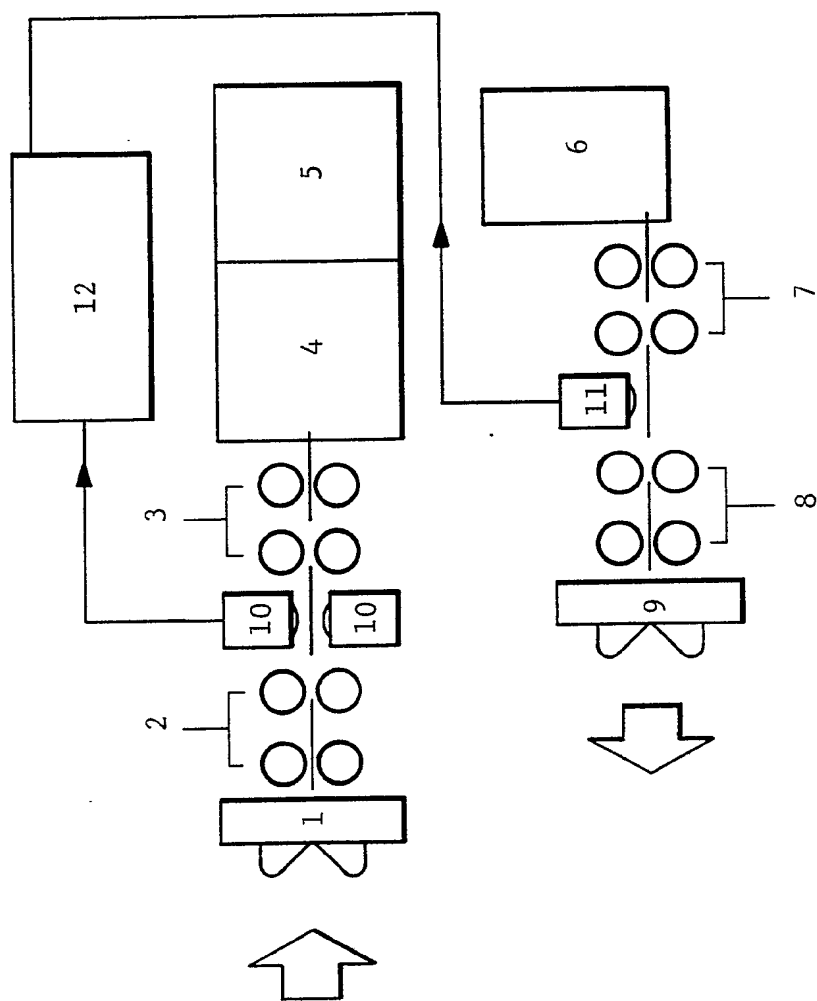


FIG. 1

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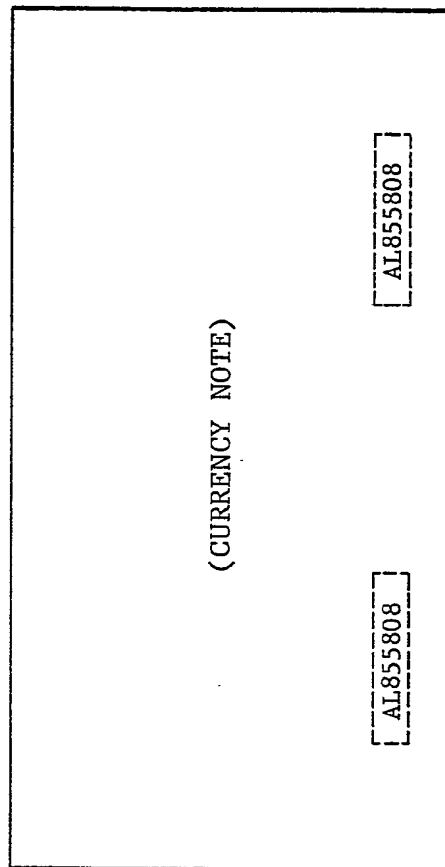


FIG. 2

AUTOMATIC TICKET DISPENSER

The present invention relates to automatic ticket dispensers. By "ticket" in this specification is meant railway tickets, telephone cards, gasoline cards and other similar items that have value.

Automatic ticket dispensers which accept currency notes are known. The dispensers, using a note acceptance module, carry out a series of validation checks by optically and magnetically sampling the currency note and measuring certain characteristics such as reflectance and transmission. Such dispensers have not been widely adopted because of the possibility that the currency notes may be high quality forgeries.

An object of the present invention is to provide an automatic dispenser which reduces the potential loss arising from forged currency notes.

The invention provides an automatic currency note accepting ticket dispenser characterised in that the dispenser includes a means for recording and storing a unique identification of a currency note being accepted, enabling this unique identification to be correlated with a unique identification of a ticket being dispensed so that if the currency note which has been accepted is subsequently found to be invalid the ticket which has been dispensed may be uniquely identified.

The invention will now be described more particularly by way of example with reference to the accompanying drawings which show, by way of example only, one construction of apparatus and the use thereof. In the drawings :-

Figure 1 is a block diagram of the apparatus; and
Figure 2 illustrates the manner in which the unique identification of the currency note is identified.

Referring to Figure 1, a currency note (not shown) is received at a currency note entry slot 1 and is conveyed by conveyers 2 and 3 to currency note acceptor 4 and currency note vault 5. When the currency note is accepted by the note acceptor 4, a ticket is issued from ticket stack 6 and is conveyed by conveyers 7 and 8 to ticket dispensing slot 9.

An optical scanner 10 located between conveyers 2 and 3 reads the serial number on the currency note, and a ticket reader 11 between conveyers 7 and 8 reads the identification of the ticket. The output from the optical scanner 10 is sent to a computer 12 incorporating optical character recognition software for analysing the result of the optical scan to determine the currency note serial number. The currency note serial number and the ticket identification are both then correlated by a processor and sent to a central monitoring system (not shown).

Subsequently, the currency notes from the vault are presented to the bank in the normal way. If a particular currency note is found to be invalid, the central monitoring system can then identify the ticket issued for the currency note, and when the ticket is subsequently presented by the purchaser the ticket may be refused or retained.

Figure 2 shows in more detail how the optical scanning is performed. The entire area of the bank note is masked except the area bearing the serial number. This area is scanned and the results of the scan are analysed to yield the serial number.

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CLAIMS

1. An automatic ticket dispenser comprising:
means for determining and storing a unique identification of a currency note inputted into the dispenser;
means for supplying a unique identification of a ticket dispensed in response to acceptance of the currency note; and
means for storing the unique identification of the ticket in correlation with the unique identification of the currency note, whereby, if the currency note is subsequently found to be invalid, the ticket may be uniquely identified.
2. An automatic ticket dispenser according to claim 1, wherein the means for supplying the unique identification of the ticket comprises first means for scanning the ticket to read the ticket's unique identification therefrom.
3. An automatic ticket dispenser according to claim 1 or 2, wherein the means for determining the unique identification of the currency note comprises second means for scanning the currency note to read the currency note's unique identification therefrom.
4. An automatic ticket dispenser according to claim 3, wherein the second scanning means is arranged to read a serial number from the currency note as the currency note's unique identification.
5. An automatic ticket dispenser according to claim 4, wherein the second scanning means is arranged to scan only a part of the currency note that contains the serial number.
6. An automatic ticket dispenser substantially as herein described with reference to the accompanying drawings.

- 5 -

Patents Act 1977
Examiner's report to the Comptroller under
Section 17 (The Search Report)

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Relevant Technical fields

- (i) UK CI (Edition K) G4T (TAE, TAX); G4X (X6);
G4V (VAC)
- (ii) Int CI (Edition 5) G07F, G07D

Search Examiner

LINDA HARDEN

Databases (see over)

(i) UK Patent Office

(ii)

Date of Search

31 JANUARY 1991

Documents considered relevant following a search in respect of claims

1 to 6

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
	NONE	

SF2(p)



Category	Identity of document and relevant passages	Relevant to claim(s)

Categories of documents

X: Document indicating lack of novelty or of inventive step.

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